

Product datasheet for **RG203490**

ATIC (NM_004044) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ATIC (NM_004044) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ATIC
Synonyms:	AICAR; AICARFT; HEL-S-70p; IMPCHASE; PURH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG203490 representing NM_004044
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGCTCCCGCCAGCTCGCCTATTTAGTGTCTCTGACAAAACCGCCCTTGTTGGAATTTGCAAGAAACC
 TGACCGCTCTTGGTTTGAATCTGGTCGCTTCCGGAGGGACTGCAAAAGCTCTCAGGGATGCTGGTCTGGC
 AGTCAGAGATGTCTCTGAGTTGACGGGATTTCTGAAATGTTGGGGGACGTGTGAAAACCTTGCATCCT
 GCAGTCCATGCTGGAATCCTAGCTCGTAATATTCAGAAGATAATGCTGACATGGCCAGACTTGATTTC
 ATCTTATAAGAGTTGTTGCCTGCAATCTCTATCCCTTTGTAAGACAGTGGCTTCTCCAGGTGTAAGTGT
 TGAGGAGGCTGTGGAGCAAAATTGACATTGGTGGAGTAACCTTACTGAGAGCTGCAGCCAAAACACGCT
 CGAGTGACAGTGGTGTGAACCCAGAGGACTATGTGGTGTGCCACGGAGATGCAGAGCTCCGAGAGTA
 AGGACACCTCCTGGAGACTAGACGCCAGTTAGCCTTGAAGGCATTCCTCATACGGCACAATATGATGA
 AGCAATTTAGATTATTTAGGAAACAGTACAGCAAAGGCGTATCTCAGATGCCCTTGAGATATGGAATG
 AACCCACATCAGACCCCTGCCAGCTGTACACACTGCAGCCAAAGCTTCCATCAGATTTCTAAATGGAG
 CCCCTGGATTTATAAACTTGTGCGATGCTTTGAACGCCTGGCAGCTGGTGAAGGAACTCAAGGAGCCTT
 AGGTATTCAGCCGCTGCCTCTTCAAACATGTACGCCAGCAGGTGCTGCTGTTGGAATTCACACTCAGT
 GAAGATGAGGCCAAAGTCTGCATGGTTTATGATCTCTATAAAACCTCACACCCATCTCAGCGGCATATG
 CAAGAGCAAGAGGGGCTGATAGGATGTCTTCAATTTGGTGAATTTGTTGCATTGTCGGATGTTTGTGATG
 ACCAACTGCAAAAATTTCCAGAGAAGTATCTGATGGTATAATTGCCCCAGGATATGAAGAAGAAGCC
 TTGACAACTCTTCCAAAAGAAAAATGGAAACTATTGTGCTTTCAGATGGACCAATCTTACAAACCCAG
 ATGAAAATGAAGTTCGAACTCTCTTTGGTCTTCAATTAAGCCAGAAGAGAAAATAATGGTGTGTCGACAA
 GTCATTATTTAGCAATGTTGTTACCAAAAATAAAGATTTGCCAGAGTCTGCCCTCCGAGACCTCATCGTA
 GCCACCATTGCTGCAAGTACACTCAGTCTAACTCTGTGTGCTACGCCAAGAACGGGCAGGTTATCGGCA
 TTGGAGCAGGACAGCAGTCTCGTATACACTGCACTCGCCTTGCAGGAGATAAGGCAAACTATTGGTGGCT
 TAGACACCATCCACAAGTCTTTCGATGAAGTTTAAAACAGGAGTGAAGAGAGCAGAAAATCTCCAATGCC
 ATCGATCAATATGTGACTGGAACCATTTGGCGAGGATGAAGATTTGATAAAGTGAAGGCCTGTTTGGG
 AAGTCCCTGAGTTACTCACTGAGGCAGAGAAGAAGGAATGGGTTGAGAACTGACTGAAGTTTCTATCAG
 CTCTGATGCCTTCTCCCTTCCGAGATAACGTAGACAGAGCTAAAAGGAGTGGTGTGGCGTACATTGCC
 GCTCCCTCCGGTCTGCTGCTGACAAAGTTGTGATTGAGGCCTGCGACGAACTGGGAATCATCTCGCTC
 ATACGAACCTTCGGCTCTCCACCAC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG203490 representing NM_004044
 Red=Cloning site Green=Tags(s)

MAPGQLALFSVSDKTGLVEFARNLTALGLNLSVSGGTAKALRDAGLAVRDVSELTGFPPEMLGGRVKTLP
 AVHAGILARNIPEDNADMARLDFNLIRVVACNLVYFVKTVASPGVTVEEAQEIDIGGVTLRLAAAKNHA
 RVTVVCEPEDYVVVSTEMQSSKSDTSLETRRQLALKAFTHTAQYDEAISDYFRKQYKQVSMPLRYGM
 NPHQTPAQLYTLQPKLPITVLNGAPGFINL CDALNAWQLVKELKEALGIPAAASFKHVSPAGAAVGIPLS
 EDEAKVCMVYDL YKTLTPISAAYARARGADMSSFGDFVALSDVCDVPTAKIISREVS DGIAPGYEEEA
 LTILSKKNGNYCVLQMDQSYKPDENEVRTL FGLHL SQRNNGVVDKSLF SNVVTKNKDLPE SALRDLIV
 ATIAVKYTSNSVCYAKNGQVIGIGAGQQSRIHCTRLAGDKANYWVLRHHPQVLSMKFKTGKRAEISNA
 IDQYVTGTIGEDL IKWKALFEEVPELLTEAEKKEWVEKLETVSISDAFFPFRDNVDRAKRSGVYIA
 APSGSAADKVVIEACDELGIILAHNTLRLFH

TRTRPLE – GFP Tag – V

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_004044

ORF Size: 1776 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_004044.7](#)

RefSeq Size: 1936 bp

RefSeq ORF: 1779 bp

Locus ID: 471

UniProt ID: [P31939](#)

Cytogenetics: 2q35

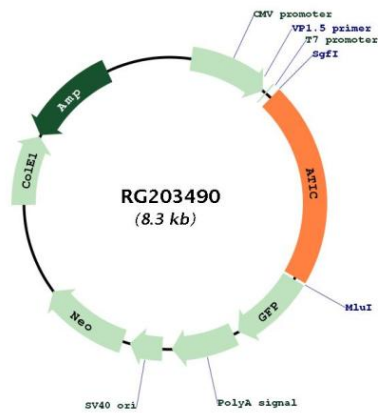
Domains: AICARFT_IMPCHas, MGS

Protein Families: Stem cell - Pluripotency

Protein Pathways: Metabolic pathways, One carbon pool by folate, Purine metabolism

Gene Summary: This gene encodes a bifunctional protein that catalyzes the last two steps of the de novo purine biosynthetic pathway. The N-terminal domain has phosphoribosylaminoimidazolecarboxamide formyltransferase activity, and the C-terminal domain has IMP cyclohydrolase activity. A mutation in this gene results in AICA-ribosiduria. [provided by RefSeq, Sep 2009]

Product images:



Circular map for RG203490